

## **REMARKS**

### **I. Claim Rejections – 35 U.S.C. § 103(a)**

#### ***Requirements for Prima Facie Obviousness***

The obligation of the examiner to go forward and produce reasoning and evidence in support of obviousness is clearly defined at M.P.E.P. §2142:

The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness.

M.P.E.P. §2143 sets out the three basic criteria that a patent examiner must satisfy to establish a *prima facie* case of obviousness:

1. some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings;
2. a reasonable expectation of success; and
3. the teaching or suggestion of all the claim limitations by the prior art reference (or references when combined).

It follows that in the absence of such a *prima facie* showing of obviousness by the Examiner (assuming there are no objections or other grounds for rejection), an applicant is entitled to grant of a patent. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443 (Fed. Cir. 1992). Thus, in order to support an obviousness rejection, the Examiner is obliged to produce evidence compelling a conclusion that each of the three aforementioned basic criteria has been met.

Applicant further notes that the U.S. Supreme Court ruling of April 30, 2007 (*KSR Int'l v. Teleflex Inc.*) states:

"The TSM test captures a helpful insight: A patent composed of several elements is not proved obvious merely by demonstrating that each element was, independently, known in the prior art. Although common sense directs caution as to a patent application claiming as innovation the combination of two known devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the art to combine the elements as the new invention does."

“To facilitate review, this analysis should be made explicit.”

The U.S. Supreme Court ruling states that it is important to identify a *reason* that would have prompted a person to combine the elements and to make that analysis *explicit*.

***Harper, Madril***

Claims 1-4, 8-14, 18 and 19 were rejected under 35 U.S.C. 103(a) as being unpatentable over Harper in view of Madril.

With respect to claim 1, the Examiner argued that Harper teaches a method for determining resource capabilities in a production environment, the method comprising:

Initially evaluating a plurality of jobs (the Examiner cited steps 412, 416 according to figure 4) within a production environment.

The Examiner admitted that while Harper estimates a job length in the production environment it does not estimate the peak demand rate associated with the plurality of jobs.

The Examiner asserted that Madril teaches a driver management service 226 which receive a print job from a translator engine 228 regarding the context of the job. The Examiner further argued that Madril teaches the management service 226 selects the proper print driver having the resources to complete the job. Resources in this case are drivers with statistical records of printers that have been reliable and that were without installation or system lock up problems.

The Examiner also asserted that Madril further teaches LUT 230 for determining a maximum print request (arguing “peak demand production rate”) corresponding to a maximum number of print jobs.

The Examiner asserted that since Harper and Madril are both directed toward a production environment, the purpose of determining a maximum job rate would have been contemplated by Harper in that steps 412 and 416 consider a number of jobs and the resources available to execute the job. The Examiner argued that to one of ordinary skill in the art, it would have been obvious to modify the processing steps of Harper, to include an LUT 230

that keeps in memory the maximum job rate which can be performed given the resources of the designated printer driver.

The Applicant respectfully disagrees with this assessment. Applicant's amended claim 1 is directed toward all of the following claim limitations:

A method for determining resource capabilities in a production environment, said method comprising:

initially evaluating a plurality of jobs within a production environment;  
estimating at least one peak-demand production rate associated with said production environment, in response to evaluating said plurality of jobs; and

thereafter automatically calculating minimal resource capacities of said production environment based on estimating said at least one peak-demand production rate by identifying at least one achievable region and at least one un-achievable region and thereafter calculating at least one Pareto optimal solution in response to identifying at least one achievable region and at least one un-achievable region, thereby determining resource capabilities thereof.

Applicant submits that these claim limitations are not taught, suggested or disclosed by the combination of Harper and Madril. Although step 412 of Harper refers to "multiply page coverage by # of pages to determine job requirements" and step 416 of Harper refers to "compare job requirements to printer resources", neither Harper nor Madril, alone or in combination with one another, teaches both the step of estimating at least one peak-demand production rate associated with said production environment, in response to evaluating said plurality of jobs; and the step of thereafter automatically calculating minimal resource capacities of said production environment based on estimating said at least one peak-demand production rate by identifying at least one achievable region and at least one un-achievable region and thereafter calculating at least one Pareto optimal solution in response to identifying at least one achievable region and at least one un-achievable region, thereby determining resource capabilities thereof.

The LUT 230 of Madril for example, does not provide for any teaching of a Pareto optimal solution and the identification of achievable and un-achievable regions in order to determine resource capabilities.

With respect to claims 2 and 12, the Examiner referred to the printer 108 of Madril and the printer 50 of Harper. The Applicant submits that claims 1 and 11 as amended also overcome the 103 rejection to respective claims 2 and 12.

With respect to claims 3 and 13, the Examiner argued that the print-shop-102 of Madril and elements 20, 22, 24, 26 and 28 of Harper function as a print-shop. The Applicant submits that claims 1 and 11 as amended also overcome the 103 rejection to respective claims 3 and 13.

With respect to claims 4 and 14, the Examiner argued that paragraph 21 of Harper and step 416 teaches this limitation. The Examiner also referred to para. 56 last 8 lines. The Applicant submits that claims 1 and 11 as amended also overcome the 103 rejection to respective claims 4 and 14.

With respect to claims 8 and 18, by lean document, the Examiner argued that it is contemplated that the document job consists of a few numbers or pages as opposed to large numbers or pages. The Examiner also asserted that this limitation is inherent with respect to both Madril and Harper that move jobs of various sizes. The Applicant submits that claims 1 and 11 as amended also overcome the 103 rejection to respective claims 8 and 18.

With respect to claim 9, the Examiner argued that the printer manager of Harper optimizes each job by sending it to the printer driver which has the resources to handle the request. The Applicant submits that claim 1 as amended also overcomes the 103 rejection to claim 9.

With respect to claim 10, the Examiner asserted that Harper teaches initially evaluating a plurality of printing jobs, and referred to steps 412 and 416, and also figure 4. The Examiner further argued that Harper teaches wherein the printing environment comprises a print shop (citing elements 20, 22, 24, 26 and 28). The Examiner admitted that while Harper estimates a job length in the production environment, it does not estimate the peak demand rate associated with the plurality of jobs.

The Examiner argued that Madril teaches a driver management service 226 which receives a print job from a translator engine 228 regarding the context of the job. The Examiner also asserted that Madril teaches the management service 226 selects the proper print driver having the resources to complete the job. The Examiner argued that resources in this case are drivers with statistical records of printers that have been reliable and that were without installation or system lock up problems.

The Examiner argued that Madril further teaches LUT 230 for determining a maximum print request (peak demand production rate) corresponding to a maximum number of print jobs.

The Examiner further argued that since Harper and Madril are both directed toward a production environment, the purpose of determining a maximum job rate would have been contemplated by Harper in that steps 412 and 416 consider a number of jobs and the resources available to execute the job. The Examiner asserted that to one of ordinary skill in the art, it would have been obvious to modify the processing steps of Harper, to include an LUT 230 that keeps in memory the maximum job rate which can be performed given the resources of the designated printer driver.

The Applicant respectfully disagrees with this assessment. Claim 10 as amended includes the claim limitation of calculating minimal resource capacities of said plurality of resources of said printing environment based on a multi-objective optimization thereof and estimating said at least one peak-demand production rate and a multi-objective optimization thereof, thereby determining minimal resource capabilities thereof. Such claim limitations are not taught, suggested or disclosed by the combination of Harper/Madril.

With respect to claim 11, the Examiner argued that Harper teaches a system for determining resource capabilities in a production environment, the system comprising:

Evaluation processor implemented at (steps 412, 416 according to figure 4) within a production environment.

The Examiner further asserted that while Harper estimates a job length in the production environment it does not estimate the peak demand rate associated with the plurality of jobs.

The Examiner also argued that Madril teaches a driver management service 226 which receives a print job from a translator engine 228 regarding the context of the job. The Examiner additionally asserted that Madril teaches the management service 226 selects the proper print driver having the resources to complete the job. The Examiner asserted that resources in

this case are drivers with statistical records of printers that have been reliable and that were without installation or system lock up problems.

The Examiner additionally argued that Madril teaches LUT 230 (as a calculation module) for determining a maximum print request (peak demand production rate) corresponding to a maximum number of print jobs.

The Examiner further argued that since Harper and Madril are both directed toward a production environment, the purpose of determining a maximum job rate would have been contemplated by Harper in that steps 412 and 416 consider a number of jobs and the resources available to execute the job. The Examiner therefore argued that to one ordinary skill in the art, it would have been obvious to modify the processing steps of Harper, to include an LUT 230 that keeps in memory the maximum job rate which can be performed given the resources of the designated printer driver.

The Applicant respectfully disagrees with this assessment and notes that claim 11 as amended includes all of the following claim limitations:

A system for determining resource capabilities in a production environment, said system comprising:

a plurality of jobs evaluated within a production environment;

estimation module for estimating at least one peak-demand production rate associated with said production environment, wherein said estimation module estimates said at least one peak-demand production rate in response to evaluating said plurality of jobs; and

calculation module for automatically calculating minimal resource capacities of said production environment based on an estimation of at least one peak-demand production rate via said estimation module, wherein said calculation module comprises at least one calculation module among a plurality of varying calculation modules for automatically calculating minimal resource capacities of said production environment, thereby determining resource capabilities thereof.

The combination of Harper and Madril does not disclose all of these claim limitations, including a calculation module that comprises at least one calculation module among a plurality of varying calculation modules for automatically calculating minimal resource capacities of said production environment.

With respect to claim 19, the Examiner asserted that Harper teaches the calculation module (LUT 230) calculates minimal resources capacities of said plurality of resources of the production environment based on a multi-

objective optimization, i.e., multiple jobs that are being considered at the same time. The Examiner referred to para. 41.

The Applicant respectfully disagrees with this assessment. Claim 19 depends from claim 11, which as amended is now allowable. The Applicant therefore submits that the rejection to claim 19 is traversed.

Based on the foregoing, the Applicant submits that the rejection to claims 1-4, 8-14, and 18 and 19 has been traversed. Applicant therefore respectfully requests withdrawal of the rejection to claims 1-4, 8-14, and 18 and 19 under 35 U.S.C. 103.

## **II. Claims Objected to As Containing Allowable Matter**

Claims 5-7, 15-17 and 20 were objected to as being dependent upon a rejected base claim. The Examiner indicated, however, that these claims would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The Applicant has therefore amended the claims accordingly. The claim limitations of claim 5 have been cancelled and incorporated into claim 1. Because claim 5 depended directly from claim 1, claim 1 is the base claim and there are no intervening claims between claims 1 and 5. Thus, the Applicant submits that claim 1 as rewritten is now in an allowable format and that any claims that depend from claim 1 should also be allowed.

Similarly, claim 11 has been amended to incorporate the claim limitations of claim 20. Thus claim 11 as rewritten is in an allowable format. Applicant submits that any claims which depend from claim 11 should also be allowed.

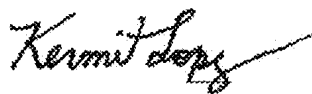
## **III. Conclusion**

In view of the foregoing discussion, the Applicant has responded to each and every rejection of the Official Action. The Applicant has clarified the structural distinctions of the present invention via the amendments and discussion provided herein. Applicant respectfully requests the withdrawal of the objections to the claims and specifications and the rejections under 35

U.S.C. §103 based on the preceding remarks. Reconsideration and allowance of Applicant's application is also respectfully solicited.

Should there be any outstanding matters that need to be resolved, the Examiner is respectfully requested to contact the undersigned representative to conduct an interview in an effort to expedite prosecution in connection with the present application.

Respectfully submitted,



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Kermit Lopez  
Attorney for Applicants  
Registration No. 41,953  
ORTIZ & LOPEZ, PLLC  
P.O. Box 4484  
Albuquerque, NM 87196-4484